

Wired system setup guide



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1 What you need to get started

This guide is for programming a system using the Rasoft Pro software (available for download at <https://www.rakocontrols.com/support/software/>).



Classic Rasoft



Rasoft Pro

It is strongly advised to download and use the new software as some new features are not supported by Rasoft classic.

Programming the system will require a communication device to be connected: When programming a wired system this needs to be a WA-Bridge or WTC-Bridge. It may also be useful to have a full list of the rooms and circuits that will be included in the project so these can be entered when using the new project wizard.

2 Create a new Rasoft Pro Project File

Open the Rasoft Pro programming software and click “File” - “New Project” to bring up the New Project Wizard. Each step of the process of creating the file is prompted in the software but further detail is provided here.

2.1 Project name and House numbers

Choose a suitable project name, typically the name of the property, a description for the project can also be added.

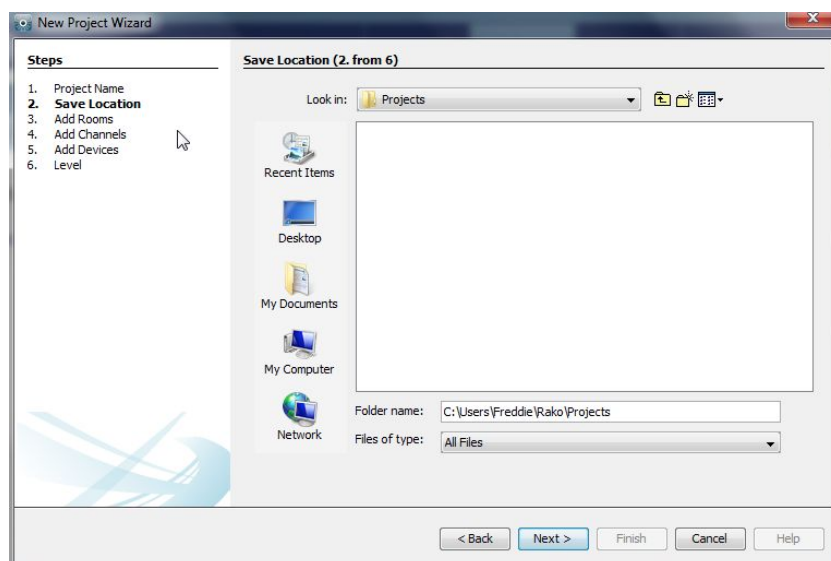
Every Rako system must be assigned a House number. Rasoft Pro will suggest a House number based on previous projects by default, a custom House number can be selected if preferable.

NB

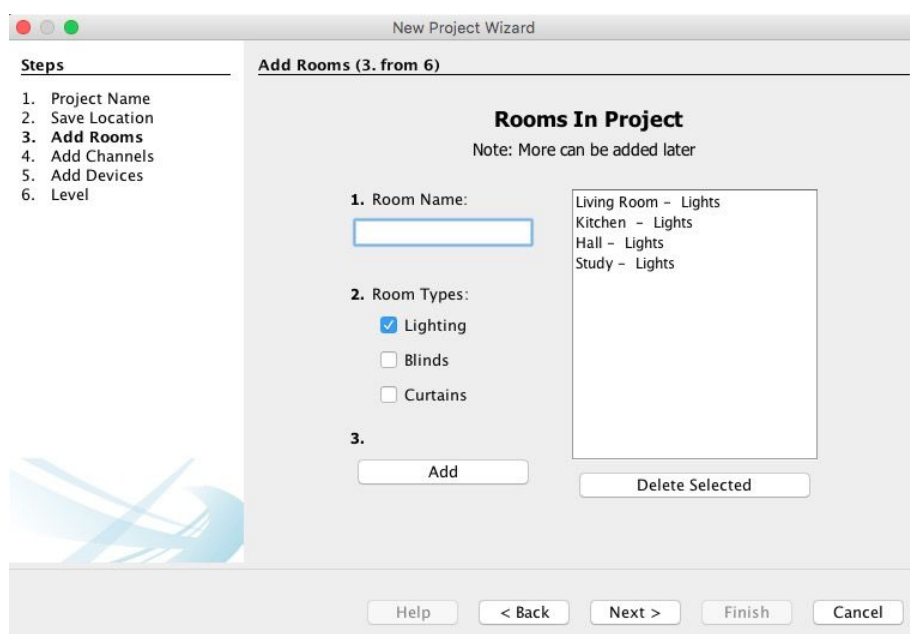
Rako products have a factory default House number of 1 so it is strongly recommend that this is not used. This will avoid interference with other systems also left on the default house address.

2.2 Save Locations

Select the Save Location for the project file. It is best to use the default save location (C:/Users/[user]/Rako) for a PC and Computer-User-Rako for a Mac. Only files saved at this address will appear in recent projects on the Rasoft Pro home screen when it is reopened.



2.3 Adding rooms



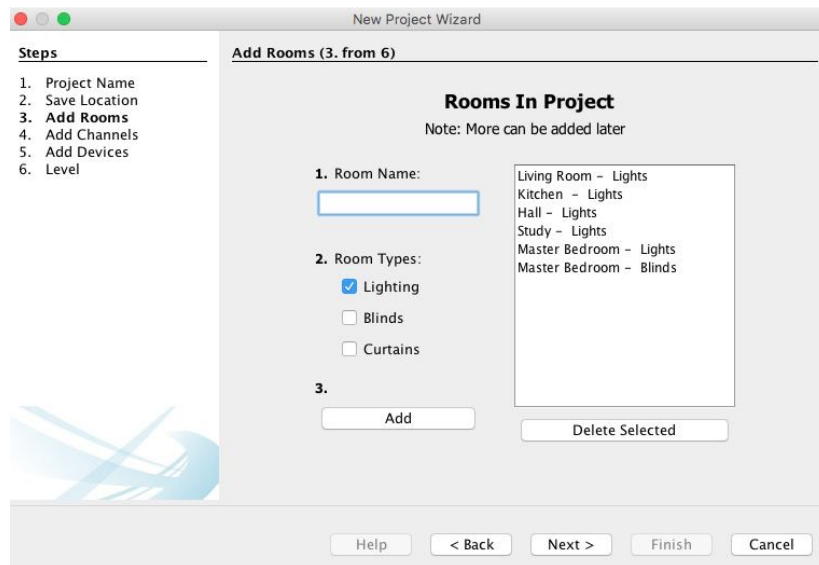
To add rooms to the project, type in the room name, select the room type (lights, blinds or switched) and click add.

Setting the correct room type is important at this stage as it will determine how certain pages of the software and App are displayed.

NB

Rako rooms do not necessarily directly relate to physical rooms. For example a physical room with lighting and blind control should be set as two Rako rooms. This is because the mode of control of lighting and blinds are quite different and for ease of programming not normally linked. (It is permissible for a lighting room and its associated blinds room to have the same name - the software & smartphone app will deal with that nicely)

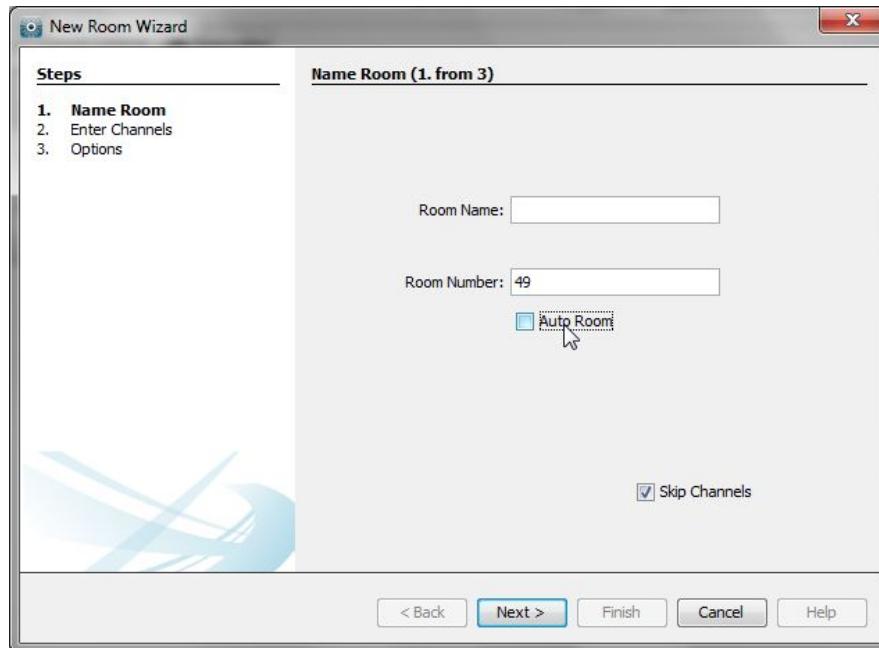
Once a room is added it will appear under the room list heading with an automatically assigned room number. Continue adding until the box on the right hand side is populated with all the rooms in the property. Rooms can be deleted at any time by highlighting them and clicking “delete selected”.



Adding rooms for group features:

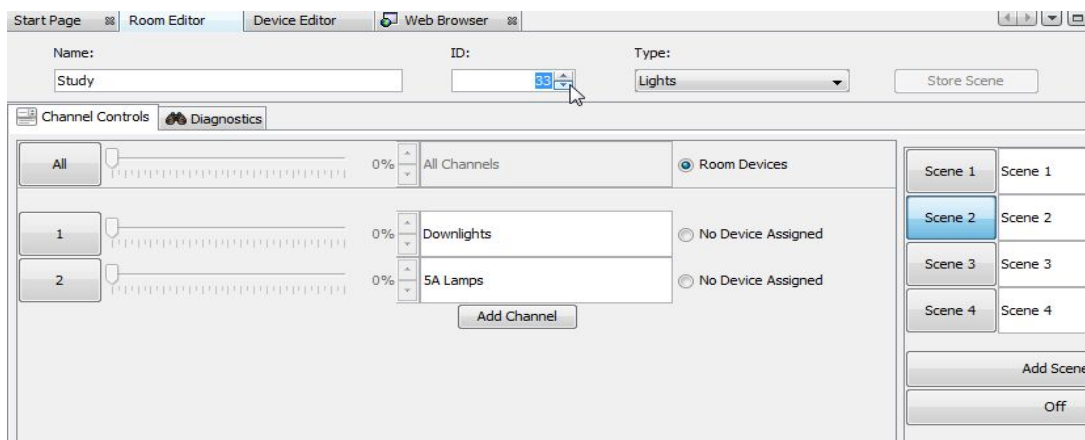
Although in most cases the automatically assigned Room numbers are adequate sometimes it may be preferable to manually select Room numbers. This will mainly be necessary when “Group” features are being used (see Appendix 3).

There are two methods of setting a custom Room number. For a new Room in an existing project select “File” – “New Room” to bring up this menu:

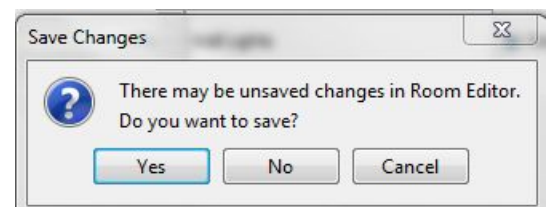
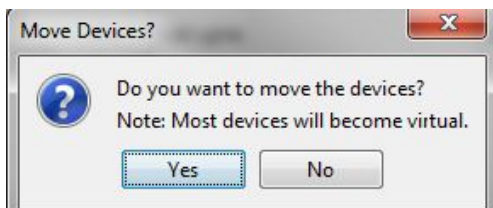


Un-check the “Auto-Room” box and enter the desired Room number.

Alternatively an existing Room number can be changed from the “Room Editor” tab. Select ID and change the value:



It is best to do this before any devices are assigned to this Room. If devices are already assigned the following warning messages will appear



NB

If wireless modules are addressed to a room with a changed number they will all have to be re-addressed as if from new.

2.4 Adding channels

In the “Add Channels” screen all the added rooms will appear along the top. Each column below the room name lists the Channels within that Room.

NB

A channel is usually the same as a circuit of lights although it may sometimes be desirable to have two or more circuits as one channel if they are always to be controlled together.

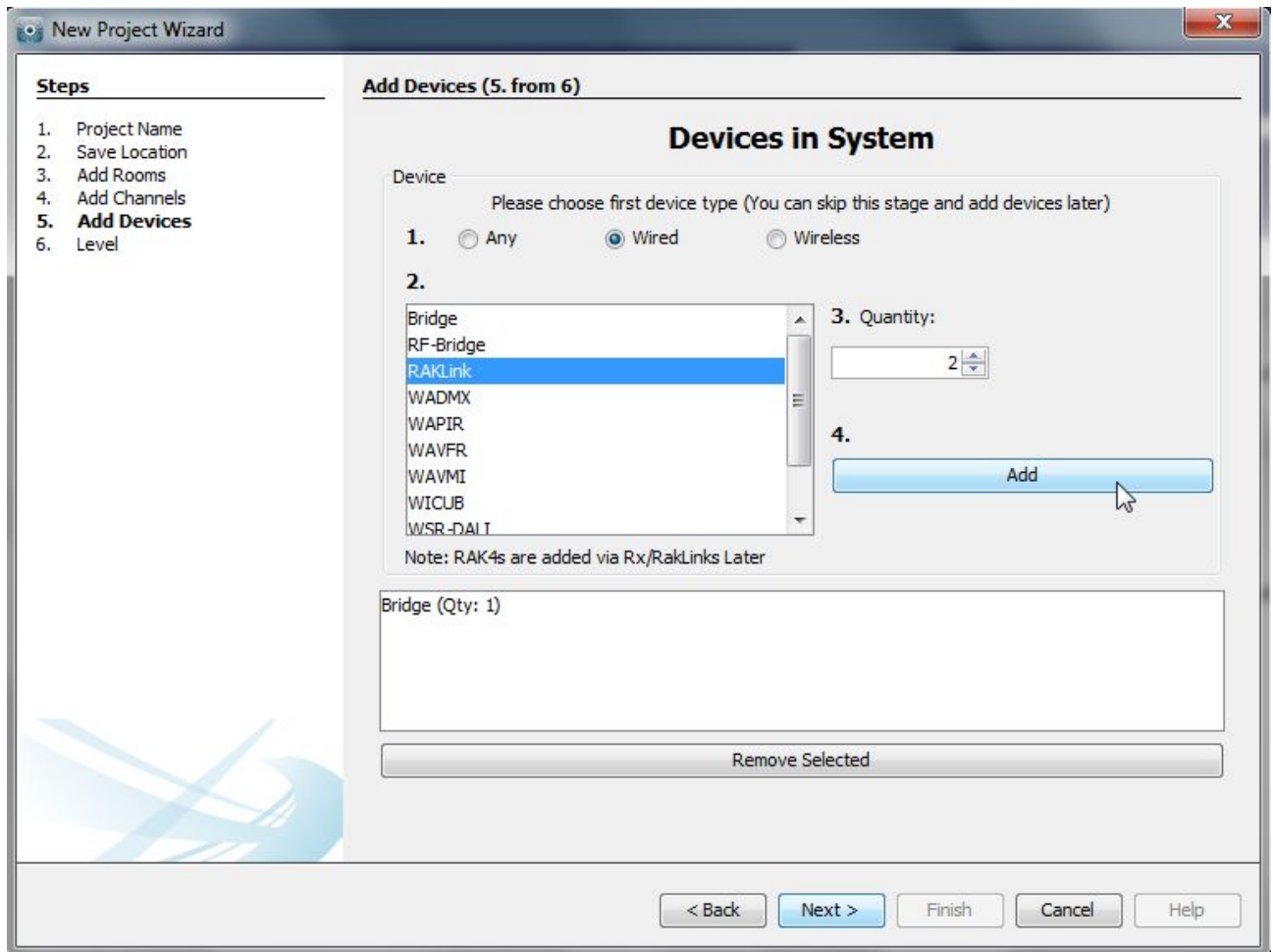
Type the name of the circuits into the column associated with each room to populate the channels. Like Rooms, new Channels can be added, altered or deleted later.

Living room	Kitchen	Hall	Study	Master Be...	Master Be...
Downlights	Downlights	Chadeleir	Downlights	Downlights	Left Blind
Wall lights	Under Cabinet	Wall lights	5A lamps	Pendant	Right Blind
Coffe LED	Kickboard LED			Bedside 5A l...	
				Bedside 5A l...	

Only add channels in at this stage if it is certain that they will be included in the final lighting system. It is very easy to add channels later, while programming the system, having mislabeled channels can cause confusion at a later stage.

2.5 Adding devices

The devices to be programmed are added to the project using this page. Devices added using this tool will be marked in the project as “Virtual Devices” and will still need to be programmed. Add them into the project by highlighting the desired device, choosing the correct quantity and pressing “Add”.



It is a good idea to add a Bridge at this stage as this will need to be programmed first (see appendix 1). All wired devices (RAKLinks, WCMs, etc.) can be added at this stage although this is not recommended for WCMs. Adding all wired devices at the start increases the chances of multiple device conflicts later.

NB

Unless programming is being done off site it is advised that only the Bridge is added at this stage. All wired devices will add themselves to the device list automatically. Adding all WCMs at this stage can cause confusion so is best avoided.

2.6 Selecting a level

There are three user levels available in Rasoft Pro. In general the intermediate level should be used, this will give full access to all menus while still providing help options if required.

The beginner mode excludes a small number of menus such as: fade rates per scene, profile editor and the change type function.

The expert mode allows access to all debug menus which are only required when programming a wired system. It also permits firmware upgrades when the hex file has been provided by a Rako engineer.

2.7 Connecting to the Bridge

Once the file has been created using the new project wizard all that remains before starting to program is to connect to the Bridge. When a Bridge can be found by Rasoft Pro it will appear in the communications window in the bottom right of the screen.

It is also important at this stage to set the Bridge house address so that it is the same as the project file this is done using the Bridge webpages. To access the bridge web-pages right click on the bridge in the communications window and select “open in browser”. For full details of how to connect to a Bridge with Rasoft Pro see Appendix 1.

3 Addressing the RAKLink

To address the RAKLink first remove the lid to access the top board. The top board should be connected to both a Bridge and the WCMs at this stage of the installation

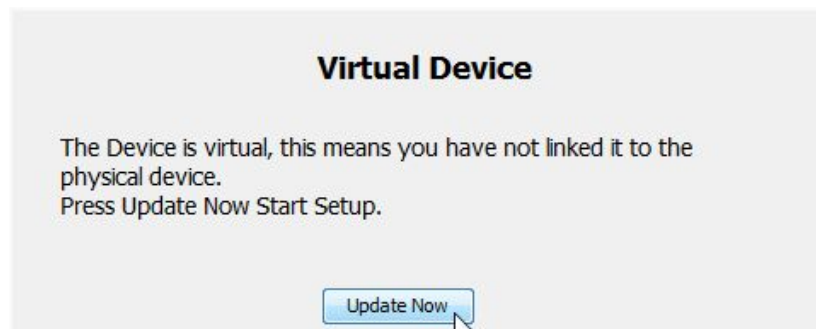
3.1 Setup if the RAKLink is already in the device list

If the RAKLink is not currently listed as a virtual device in the Device List proceed straight to section 3.2.

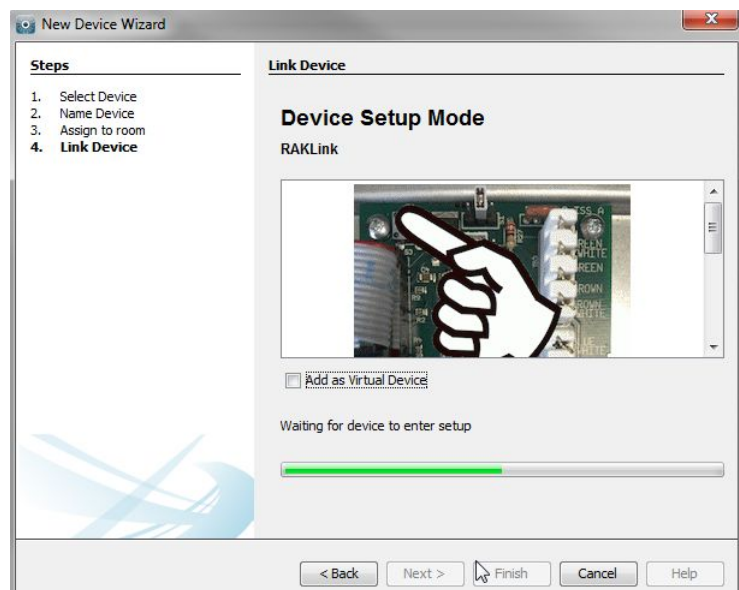
Select the RAKLink from the device list in the Rasoft Pro software (note the orange icon indicating this is currently a virtual device).



This will bring up the following message in the device editor.

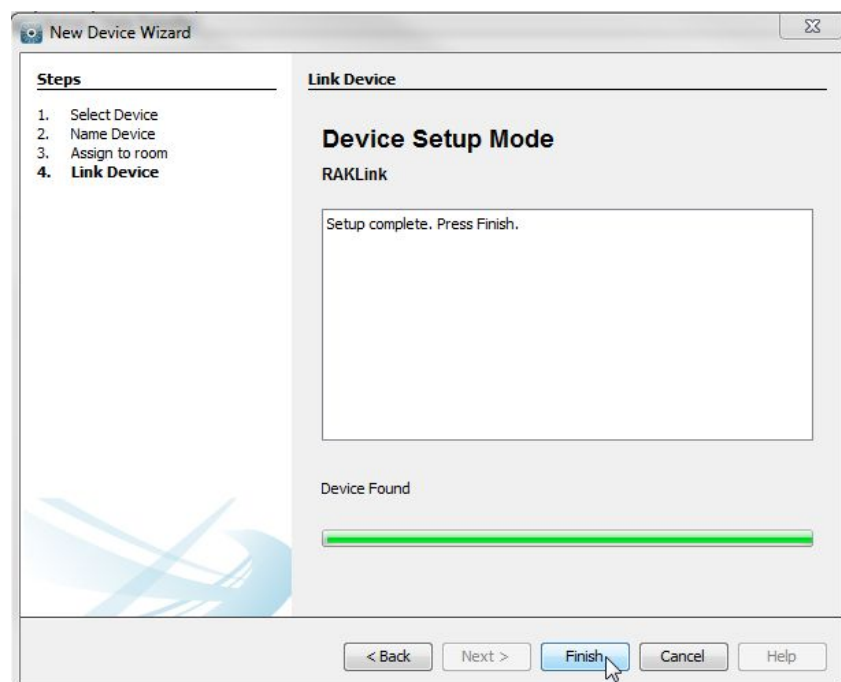


Select “update now” to open the new device wizard for the RAKLink.

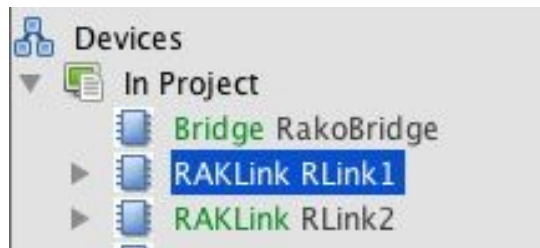


Now return to the RAKLink top board: in the top left corner is the blue setup button. Pressing this will bring the top LED on, continue to hold the button down until the top LED begins to flash (takes around 5 seconds) when it does release the button.

If successful the RAKLink should now be addressed and the screen below displayed. Select finish to complete setup.



The newly added RAKLink will now appear with green text and a blue icon in the device list (bottom left of the screen).



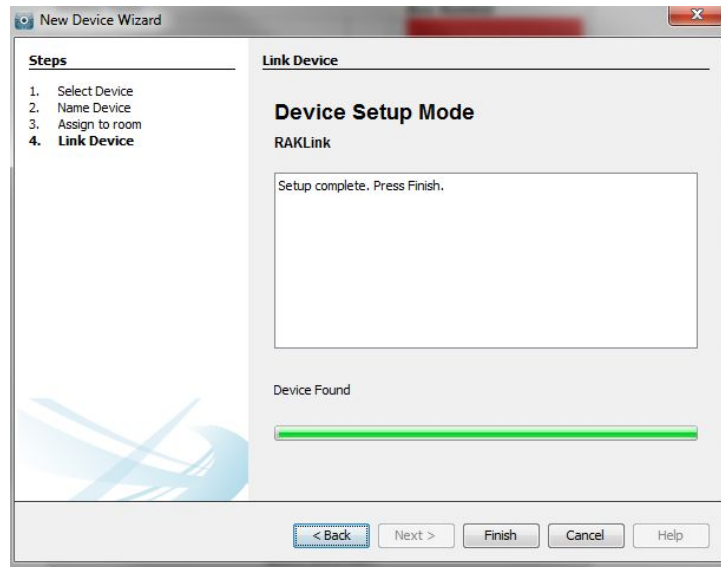
3.2 Setup if the RAKLink is not in the device list

It is not necessary to have added the RAKLink as a device (either via the new project wizard or “add device” tool) before setting it up. However it is useful to do so if mappings are to be completed off-site. It also encourages the programmer to address the RAKLinks first which is good practice and helpful for fault finding.

If the RAKLink does not already appear in the project as a virtual device it can added directly by putting the RAKLink into setup mode. Press and hold the blue button in the top RAKLink until the top LED begins to flash (takes around 5 seconds). If successful the pop up box below will appear in the software:



Give the RAKLink an appropriate name and click through the remaining two windows. As the setup button has already entered setup mode the “Link device page” will already read “Device Found”.



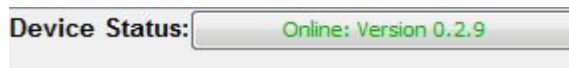
The newly added RAKLink will now appear with green text and a blue icon in the device list (bottom left of the screen).



3.3 Other RAKLink information

Device statuses

Devices that are connected to the CAN network will have a device status at the top right of the device editor.



Online: Indicates that the Bridge is successfully communicating with this device.



Virtual Device: This device has not been addressed.

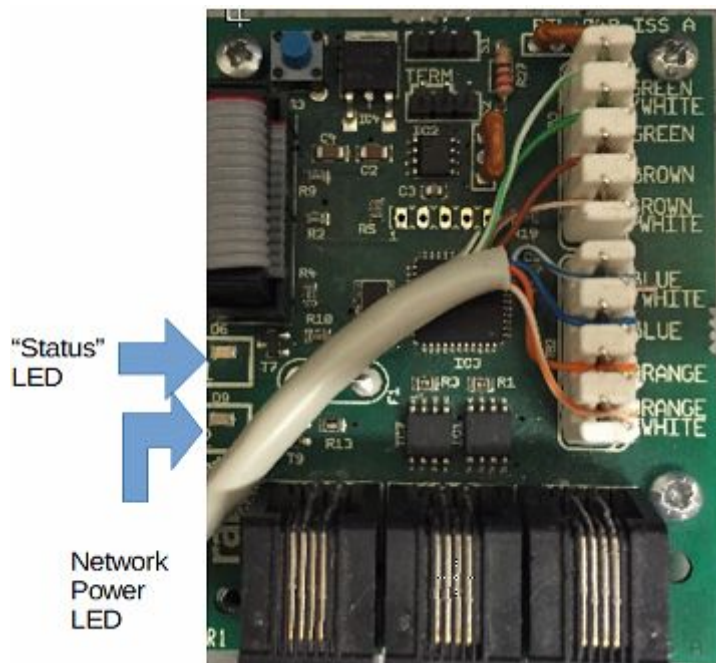


Not Found: The device has been addressed but cannot communicate with the Bridge. Usually indicates a wiring problem of some sort.

Device Status: No Comms to check

No Comms. to check: Rasoft cannot talk to the CAN network at all. Usually means that the Bridge is not connected to the computer correctly.

Indicator LEDs



Status LED

The status LED is very useful when programming a system.

It will flicker whenever data is received by the top board of the RAKLink for example if a button is pressed on a WCM or a signal sent to the RAKLink from Rasoft Pro.

This LED can also indicate if the RAKLink is either in setup or “ping” mode. Setup mode is a slow flash and indicates the device is sending a setup signal to the software so the RAKLink can be addressed. The RAKLink is put into ping mode by continuing to press and hold the button for a further 3 seconds after the setup flash starts.

The Ping mode feature allows the data cabling of the CAN network to be checked without needing to use a computer.

When a RAKLink is put into ping mode the status LED will flash rapidly. If everything is connected correctly all other RAKLinks will also start to flash rapidly and all WCMs will cycle through the LED backlights.

Power LED

This will illuminate if the 15V CAN network supply is powered up. This means that either this RAKLink or another RAKLink connected via punchdown or RJ11 is switched on.

NB

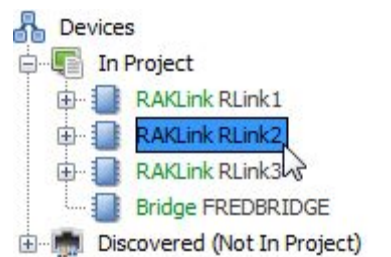
Do not remove the top tray of the RAKLink while it is switched on. Doing so is dangerous and also runs a significant risk of damaging the RAKLink.

4 Adding the lighting circuits to the RAKLink(s)

Once the RAKLink is added as a device into the software the next stage is to assign each of the lighting circuits to the relevant RAK channel. Two varieties of RAKs exist: RAK4s and RAK8 the process for programming each is essentially the same although a few extra features are available on the RAK8s.

4.1 Adding RAKs (RAK4 and RAK8) to the RAKLink

Select the RAKLink to be programmed in the Device List to open it in the Device Editor.



The “RAK4s” tab should open and appear as below. In the software the RAKs are considered part of the RAKLink so need to be added using this tab.



There are two methods that can be used to add the RAK boxes to the RAKLink. Either using the “Auto Discover” feature or manually by using “Specify Extra RAK”.

Using the Auto Discover feature:

Pressing the “Auto Discover” button will cause the RAKLink to automatically check for RAKs connected to it. All RAK8s can be discovered and added this way as can newly purchased RAK4s.

The screenshot shows a web interface titled "Add RAK Boxes here". It contains two identical sections for adding devices. Each section has a "Device" header, a "Box Type" dropdown menu set to "RAK8-MB", a "Box Number" spinner set to 0 and 1, and a red bar representing the box number slots. Below each section are buttons for "RAK8 Info" and "Extras". At the bottom of the interface are buttons for "Specify Extra RAK" and "Auto Discover".

The Auto Discover feature will also automatically fill in what types of RAKs are connected to this RAKLink.

Adding the RAK boxes manually:

If the Auto Discover feature does not function correctly or if an older system is being programmed then the RAK boxes will have to be added manually. Click “Specify extra RAK” until the number of RAKs connected to the RAKLink are displayed.

The type of each RAK (4T, 4F, 4R etc.) also needs to be set using this screen if the RAK is added in this way. It is important to set these as the settings available in the software vary between different types of RAKs.

4.2 Setting the DIP-Switches

Each RAKLink can be used to control up to 32 circuits. This can be made up of any combination of RAK4s and RAK8s. For example: three RAK8s and two RAK4s or two RAK8s and four RAK4s.

The screenshot shows a web interface titled "Add RAK Boxes here". It contains three sections for adding devices. Each section has a "Device" header, a "Box Type" dropdown menu set to "RAK (Unknown Type)", a "Box Number" spinner set to 0, 1, and 2, and a red bar representing the box number slots. Below each section are buttons for "Extras". At the bottom of the interface are buttons for "Specify Extra RAK" and "Auto Discover".

Set the box numbers of each stack of RAKs as prompted by the software. It is essential that box numbers are not duplicated as two RAKs with the same box number will not be able to be separately programmed.

The box numbers are set by the dip-switches 1-4 on each RAK. These switches are easily seen near the top edge of each RAK card. The software provides the dip-switch settings required for each box number.

NB

The Box number of the RAKs can be set in any order. The RAK connected directly to the RAK-LINK does not need to be 0.

4.3 Identifying circuits connected to the RAKs

Before mapping the RAKLink it is important to know what each of the RAK circuits is feeding. Usually this information should be available but sometimes it is necessary to manually identify each circuit after it has been wired.

It is possible to identify circuits using the dip-switches (RAK4s) or toggle buttons (RAK8s).

Identifying circuits on a RAK4

Switches 5,6,7 and 8 can be used to toggle the RAK4 outputs on and off.



Switch 5 equates to circuit one of the RAK, 6 to circuit two etc. Moving the dip-switch up will turn on the corresponding circuit moving it down will turn it off.

Identifying circuits on a RAK8

Along the top of the RAK8 motherboard is a row of button switches. These can be used to toggle individual circuits on and off in the same way as the RAK4's dip switches.

CAUTION! *To perform this test the RAKs need to be powered up, do not touch any part of the circuit board including heatsinks. If in any doubt ask the installing electrician to do this.*

4.4 Mapping the RAKLink

Having addressed the RAKLinks and assigned all the RAKs box numbers it is now possible to map the RAKLink. Mappings match the Rooms and Channels created in the software to the physical RAK Circuits by assigning them different Box and Circuit numbers.

To access the mappings screen select the RAKLink in the Device List and select “Circuits (Mapping)” from the Device Editor tabs at the top of the middle panel of the screen.

Box	Circuit	Room	Room#	Channel	Channel#
0	1	Hall [Rm: 9]		9 Pendant [Ch: 2]	2
0	2	Kitchen [Rm: 17]	17		
0	3				
0	4				
1	1			Downlights [Ch: 1]	
1	2			Under Cabinet [Ch: 2]	
1	3			Kickboard LED [Ch: 3]	
1	4			Assign to new channel	
2	1				
2	2				
2	3				
2	4				

The Box and Circuit numbers will already have been filled in to match the RAKs added previously. Starting with Box 0 Circuit 1 click on the empty box under the “room” heading to bring up the drop down menu. Select the Room and Channel that is supplied by this RAK Circuit. If all the rooms and channels have been added into the project already repeat the process for the channels and continue until all maps have been added.

NB

If a room does not appear on the mapping screen then it needs to be added into the project by selecting “File”-“New room” to bring up the new room wizard.

If a channel does not appear on the mapping screen it can be added directly from the mappings page. Open the channel drop down menu and select “Assign to new Channel”. Enter the name of the new channel, it will automatically be assigned to the next unnamed channel in that room.

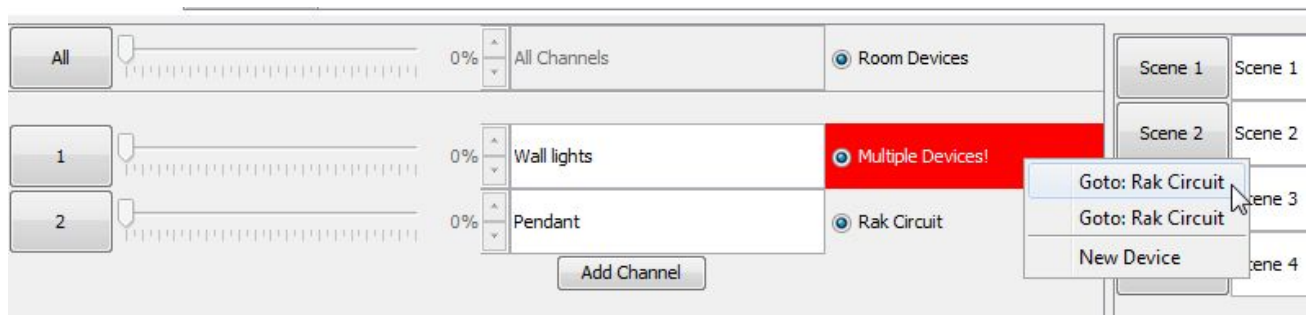
Box	Circuit	Room	Room#	Channel	Channel#
0	1	Hall [Rm: 9]		9 Pendant [Ch: 2]	2
0	2	Kitchen [Rm: 17]	17	Under Cabinet [Ch: 2]	2
0	3	Living Room [Rm: 25]	25	Wall lights [Ch: 1]	1
0	4	Living Room [Rm: 25]	25	Pendant [Ch: 2]	2
1	1	Study [Rm: 41]	41		
1	2				
1	3			Downlights [Ch: 1]	
1	4			5A Lamps [Ch: 2]	
2	1			Assign to new channel	
2	2				
2	3				
2	4				

Continue mapping circuits in this way until all used circuits associated with the RAKLink are mapped to channels. Click “Save For Upload” at the bottom of the mapping page to upload the mappings to the RAKLink.

NB

If a room is selected but the channel box is left blank then this circuit will remain unmapped. This means it will not respond to commands even from the assigned room number.

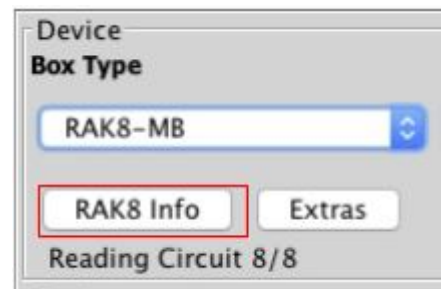
Once all the mappings are filled in it is a good idea to check for any “multiple device” errors. This is a good way of discovering any circuits that have been entered twice by accident.



Check through all of the rooms, any channels which have been mapped to more than one circuit will display as above. Check the mappings to find where the channel has been duplicated or right click on the multiple devices warning to be linked directly to the RAKLink page.

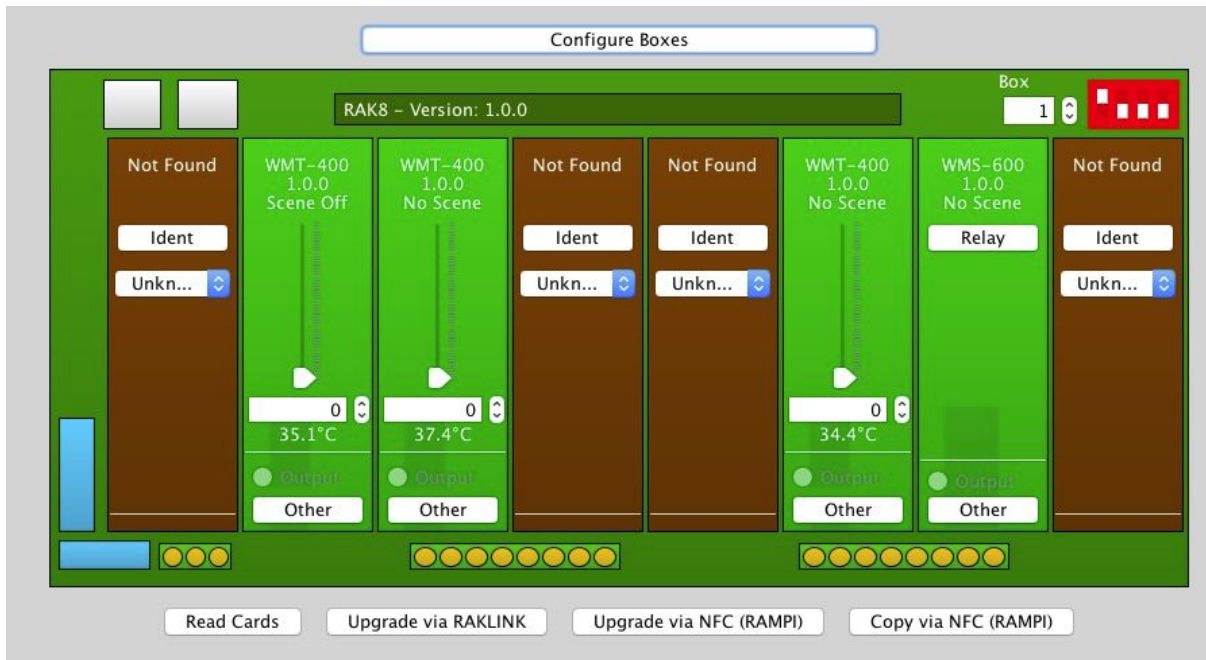
4.5 Extra features of the RAK8

The RAK8 has additional diagnostic features that are not found on the RAK4 modules. These are found in the “RAK8” tab. To access this tab for a specific RAK8 click the “RAK8 info button” in the “RAKs” tab.



The RAK8 tab:

Once the “RAK8” tab is opened for a particular box then the software will scan the RAK8 to see which daughterboards are connected. It will also test for some circuit faults or communication problems. If faults are found they will be described on the left hand side of the screen.

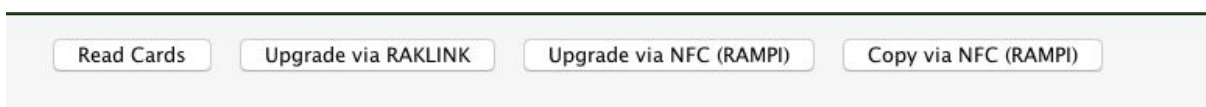


In the above example 4 daughterboards are connected to the RAK8. Slots 1,4,5 and 8 are unfitted. Slots 2,3 and 6 are fitted with WMT-400s and slot 7 is fitted with a WMS-600.

From this screen it is also possible to directly transmit a command to the RAK8 daughterboard either by using the slider of by pressing “other” and selecting a scene. This feature is for testing purposes only, the RAK8s must still be addressed in the “Circuits(Mapping)” tab and primarily controlled from the room editor.

Upgrading the RAK8 cards:

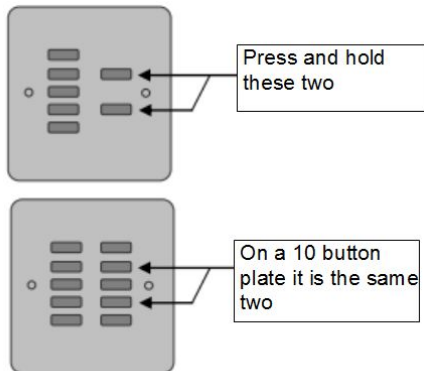
This screen can also be used to upgrade the firmware of the RAK8-MB either via the RAKLink or RAMPI.



Upgrading the RAK8s with this method is not routinely necessary and should only be done if advised to a member of Rako technical support staff.

5 Addressing the WCMs

Once the RAKLink(s) are all identified the next step is to assign all the WCMs as devices. Like the RAKLink the WCMs must be put into setup mode to be addressed in the software. To do this:



5.1 Putting a WCM into setup mode

To put a WCM-070 (7 button) into setup:

Press up and hold the fade up and fade down buttons until the LEDs on the plate start to cycle.

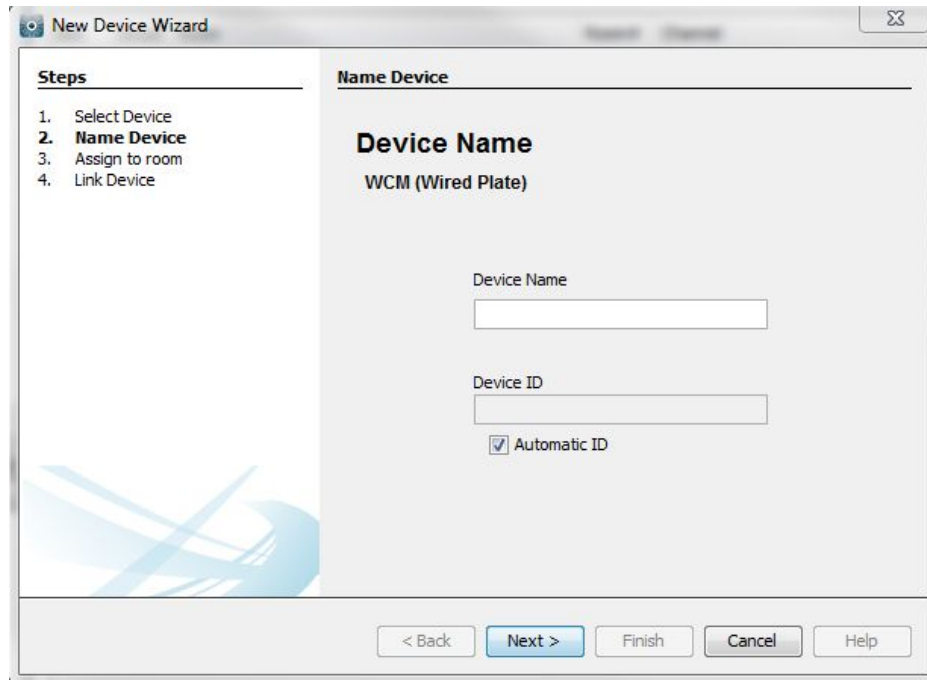
To put any other WCM into setup:

Press and hold the equivalent buttons (second from top and second from bottom) until the LEDs on the plate start to cycle. With some button configurations there may be no plastic buttons in these positions. If this is the case remove the cover plate and press the two rubber contractors on the circuit board where the buttons would be.

5.2 Naming the WCM

Once the WCM is in setup mode a pop up box will appear on the software. If no pop up box appears then there is an issue with the installation or the connection of the software with the system.

Enter a device name that states which physical room the plate is in and its location within it. This will be the label that appears in the device list.



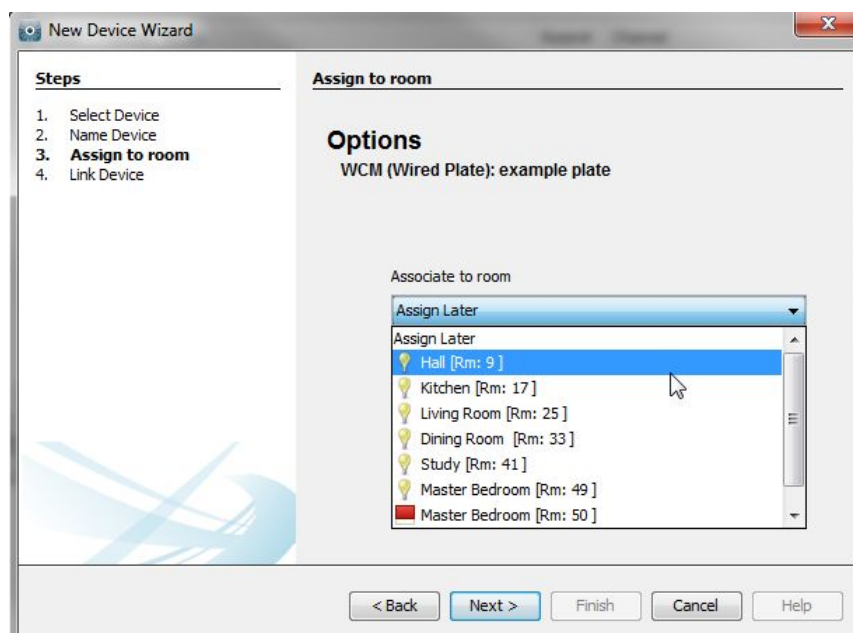
NB

It is very important each plate is identifiable from this name. If a plate cannot be easily identified from its name it will make any fault finding and button mapping that may be required later much more difficult.

Once named, click next, ensuring that the Device ID is left on “automatic ID”.

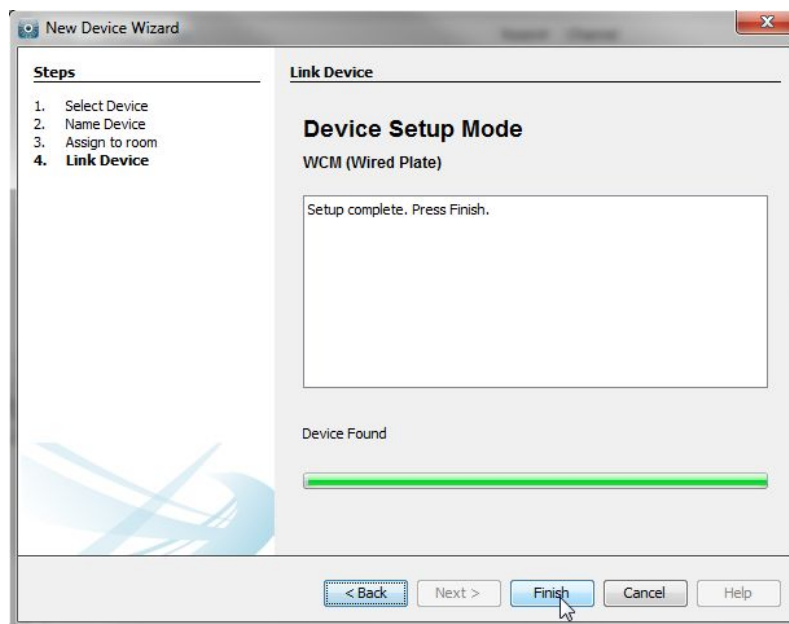
5.3 Associating the WCM to a room

All WCMs must be associated with a Room. This will be the room number that the plate transmits when set to “local room”. In nearly all cases this will be the same as the room in which it is located: select this room from the drop down menu and click “next”.

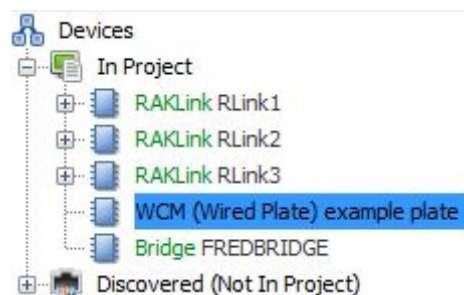


5.4 Completing the setup process

At this stage the WCM has all the information required by the software to be added as a device, click next on the “link device” screen. The WCM will now appear in the device list.



Once added successfully the “WCM” text in the device list will be green and the device status in the device editor should be “online”.



Repeat this process for all WCMs until the device list is populated with all WCMs in the system.

7 Mapping the WCM buttons

By default a WCM will behave as if they are a seven button keypad, ie four scenes fade up and fade down. When other types of WCM are used or if custom button maps are required the “button config (mapping)” screen needs to be used.

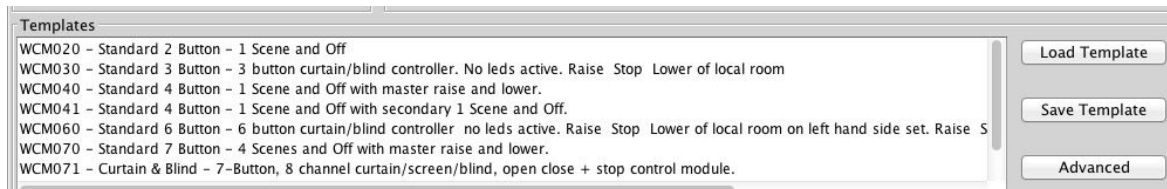
The button mapping screen can be accessed by selecting it in the device list this will open the device editor of the WCM to be programmed.

7.1 Templates

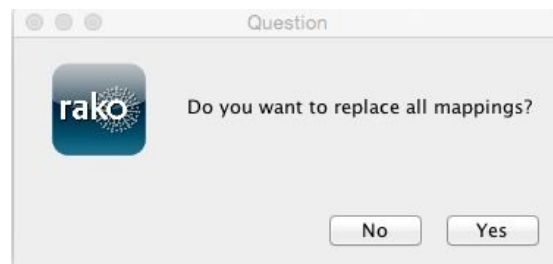
Mapping templates for all common WCM button layouts are available in Rasoft Pro.

To apply a template to a WCM:

- In the button mapping tab of the device editor scroll to the bottom to view the templates tile



- Select the relevant template and click load template. This will open a pop up box; select yes to overwrite the mapping with the template



- The mappings for this template will now appear in the left tile of the device editor
- Click "save for upload" at the bottom of the page to upload these setting onto the WCM

7.2 Setting a custom button map

By default or when any of the templates are uploaded the WCM will only send commands to the "local room" defined during the initial setup of the WCM. With a wired keypad it is possible to make any button send a command to any device in the system by manually writing the maps into the software.

The main section of the mapping screen is divided into three sections, from left to right "mappings" "keypad" and "output action".

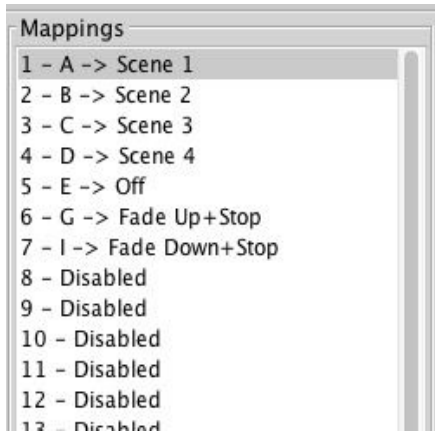
Mappings

This section shows the mappings that will be uploaded to the plate. This tile is also used to select the mapping to be edited. The mapping is summarised in this tile in the format:

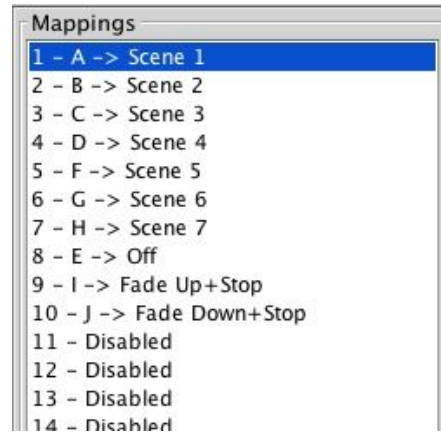
- Button input:** letter corresponding to that selected in the keypad tile
- Room:** this will only show if the room number is different to the "local room"
- Action:** scene, fade, level etc.

A WCM can hold twenty four maps but a maximum of three maps should be used per button input (letter). When more than three commands are desired from a single button press either groupings or a Bridge Macro (see Bridge guide) should be used.

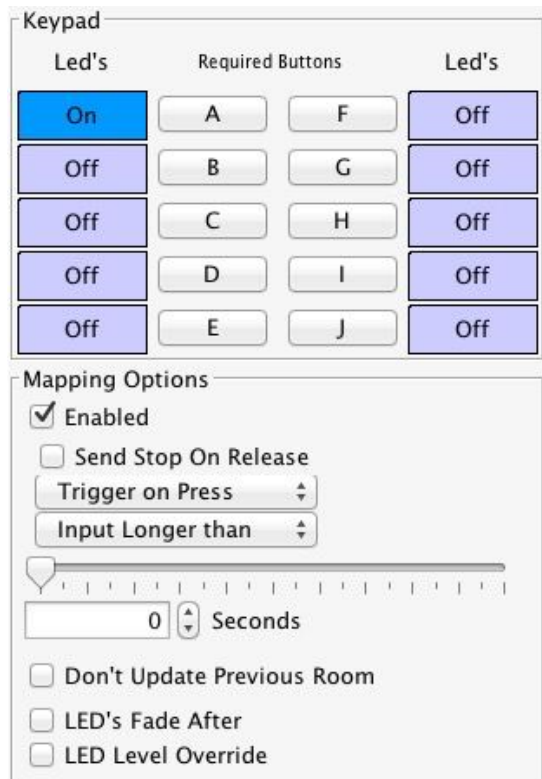
Seven button plate maps (default):



Ten button plate maps (requires template):



Keypad



This tile defines the input to be mapped. The lettered buttons equate directly to all the buttons available for use on a WCM, often not all these will be occupied and will remain

unmapped. So on a ten button plate (WCM100) all buttons A-J will be used whereas on a two button plate (WCM020) only inputs B and D are used.

There are two types of button input that can be used in a WCM mapping:

Trigger on press: As soon as the button is pressed the mapped “output action” will be sent. In nearly all cases this is the setting used.

Trigger on release: A trigger on release will send the mapped “output action” command once the button is released. This is usually used to allow two function to be associated with a single button.

When mapping a fade command it is vital that the “send stop on release” check box is ticked. When a dimmer hears a fade command it will continue to fade until it receives a “stop”.

The screenshot shows a configuration window titled "Output Action". It contains the following elements:

- Room:** A dropdown menu currently showing "Local Room".
- Channel:** A dropdown menu currently showing "All Channels".
- Action:** A dropdown menu currently showing "Scene".
- Scene:** A dropdown menu currently showing "Scene 1".
- Fade Rate:** A horizontal slider with a white triangle marker at the left end.
- Use Default Value:** A checked checkbox.

Output action

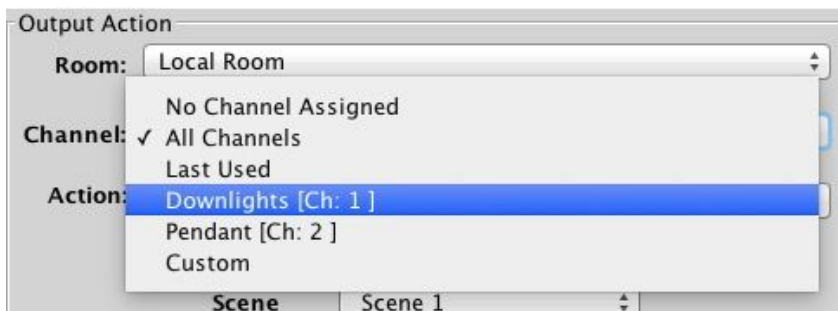
This tile is used to set the command sent from the input selected in “keypad”. Before being altered the room will be the local room for that keypad. All the rooms in the project will be visible in the drop down menu as will an option for a custom room which can be manually added and previous room.

NB

Previous room will set the room number to that which was last sent by this keypad. It will not track commands sent by any other keypads.



The next drop down menu can be used to change the channel affected by this command. Usually “all channels” is selected so that the entire room will be affected by this map. All the rooms added in the room editor will appear in this drop down menu as will “last used” and “custom”.

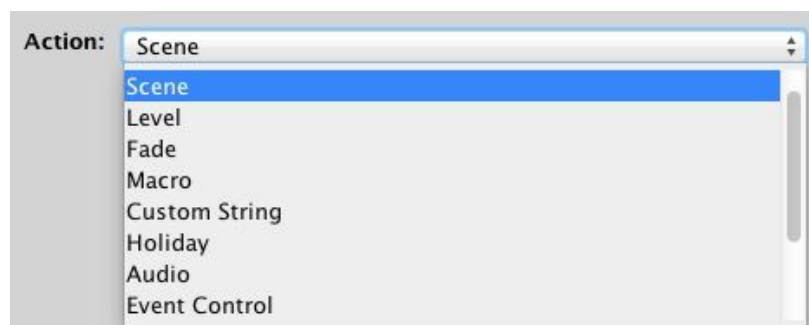


The last used function sets the channel to the most recent previous command sent from that device. This is commonly used when a WCM is set up to toggle individual channels. In this case “last used” is used for the fade buttons so that the user can adjust the brightness of the channel they have just turned on.

NB

Like “previous room” the “last used” function only works per WCM. It will not track the commands from another WCM even if it shares a local room.

The action section sets which command will be sent to the room and channel that have been set.



7.3 Extras

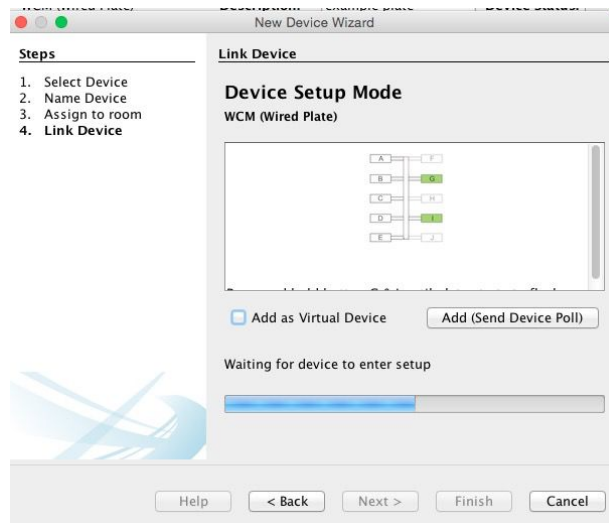
The extras in the WCM device editor contains several useful features:



Ident device: This command is useful to discover which WCM in the software is associated with which physical plate. It will make the LEDs on the front of the WCM flash three time.

Upgrade device: **WARNING DO NOT USE UNLESS INSTRUCTED TO BY RAKO STAFF.** This tool allows a firmware update to be performed on the WCM over the CAN network.

Reassign/Clone device: This will upload all of the data on the WCM selected in the device editor to the next WCM to be put into setup mode.



8 Setting scenes

With all the circuits addressed and wall-plates set up the system should be fully functioning. At this stage the scene settings will be on default:

Scene 1 – All on 100%
 Scene 2 – All on 75%
 Scene 3 – All on 50%
 Scene 4 – All on 25%

8.1 How to set a scene

While this is fine it does not provide particularly imaginative mood settings for the room. To set scenes:

- Click on the room to bring up the room editor tab
- Select a scene (the selected scene will turn blue)
- Move the slider for each channel to the desired light level
- Press “store scene”

Scenes can be given names rather than numbers. This will change how they are displayed on the Rako App.

To set more than 4 scenes click the add scene button. Up to 16 scenes are programmable on each dimmer.

8.2 Advanced scene setting features:

Right click on the “store scene” button to make a drop down menu appear:



These extra options allow scenes to be transmitted without the need to individually reset every slider for every channel. This is particularly useful when a dimmer has been swapped and the scenes need to be reuploaded to match those in the removed dimmer.

Send Store Command:

Performs the same function as pressing the “Store Scene” button normally (left clicking).

Transmit all sliders:

Retransmits all the current slider levels for the selected scene.

Write Scene “1” Level Data:

Uploads all levels and stores the currently selected scene (in this case scene 1)

Write All Scenes Level Data:

Uploads all levels and stores all scenes. Essentially reuploads all scene information for this room to all dimmers addressed to this room.

Appendix

A1 Setting up a communication device:

A1.1 RAMPI

To connect to the RAMPI simply plug the module into the USB port on your computer. Rasoft should find the device, right click on “RAMPI” in the communications box and select connect. If the “RAMPI” icon does not appear click refresh below the communications box.

A1.2 Bridge

Step 1: Connect the Bridge to a router:

The WA & WTC-Bridges are supplied with an RJ45 network cable. Connect this to an unused port on a wireless router. Connect the Bridge the Rako Wired Network via the RJ11 port and supplied cable (white cable). This can be plugged directly into the RAKLink or RAKstar (if used). It can also be punched down at any point in the wired network via a WP-CON or WP-CONC. A Blue light should flash continuously within the Bridge. Connect your PC to the same router, either by wireless network or by fixed Ethernet cable.

Set the Bridge House Number:

Every RAKO wireless system has a House ID number between 1 and 255. It is necessary to tell the Bridge which house ID number has been chosen so that it talks to the correct house. The RASOFT configuration file gives the chosen House ID number at the top of the room list.

NB

For a system that has already been programmed but there is no file: look at the DIP switches settings on the rear of the lighting control wall plate. The dip-switch information panel (right click on room in room list and select dip-switches) can be used to decode these binary settings. Move the switches on the screen to match those of the wall-plate to show the House and Room number.

The Bridge house number is set via the web page interface. In Rasoft Pro in the bottom right communications window right click on the Bridge and select “Open in Browser”.



When successfully loaded the Webpage will appear as below:



The screenshot shows the Rako Bridge web interface. At the top left is the Rako logo. A blue navigation bar at the top right says "Rako Bridge". On the left is a vertical menu with buttons for "Overview", "Remote Control", "Hardware", and "Configuration". The main content area is titled "Welcome To RAKO Bridge" and displays the following status information:

Running:	●
Version:	2.1.8 WA
Build Date:	Apr 23 2015 13:07:03
Bridge Time:	6/24/2015, 11:43:56 AM
Bus Status:	Active
Dawn:	04:45
Dusk:	21:16

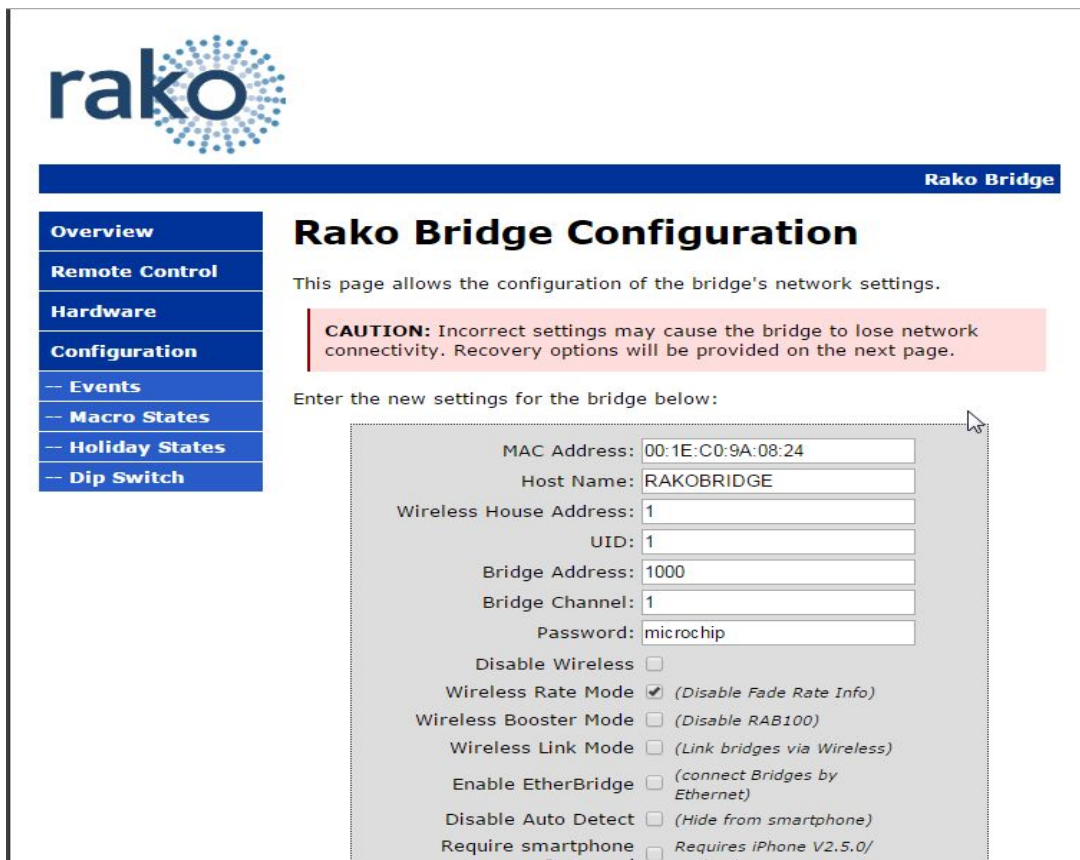
At the bottom, a copyright notice reads: "Copyright © 2010-2015 Rako Controls. V2.2.9"

Click on the Configuration Button on the right hand side.

The default User Name is **admin**

The default password is **microchip**

When successfully logged in, the screen below will be displayed:



The screenshot shows the Rako Bridge web interface with the Configuration page selected. The navigation menu on the left includes "Overview", "Remote Control", "Hardware", "Configuration", "Events", "Macro States", "Holiday States", and "Dip Switch". The main content area is titled "Rako Bridge Configuration" and contains the following information:

This page allows the configuration of the bridge's network settings.

CAUTION: Incorrect settings may cause the bridge to lose network connectivity. Recovery options will be provided on the next page.

Enter the new settings for the bridge below:

MAC Address:	00:1E:C0:9A:08:24
Host Name:	RAKOBIDGE
Wireless House Address:	1
UID:	1
Bridge Address:	1000
Bridge Channel:	1
Password:	microchip
Disable Wireless:	<input type="checkbox"/>
Wireless Rate Mode:	<input checked="" type="checkbox"/> (Disable Fade Rate Info)
Wireless Booster Mode:	<input type="checkbox"/> (Disable RAB100)
Wireless Link Mode:	<input type="checkbox"/> (Link bridges via Wireless)
Enable EtherBridge:	<input type="checkbox"/> (connect Bridges by Ethernet)
Disable Auto Detect:	<input type="checkbox"/> (Hide from smartphone)
Require smartphone Password:	<input type="checkbox"/> Requires iPhone V2.5.0/Android V1.1

Change the “Wireless House Address” to the house number in the project file (default will be 1). Scroll to the bottom of the screen and press “save config”. The following message will be displayed if the settings are successfully changed:

Reboot In Progress...

Your settings were successfully saved, and the bridge is now rebooting to configure itself with the new settings.

Your bridge is now located at: <http://RAKOBIDGE/>

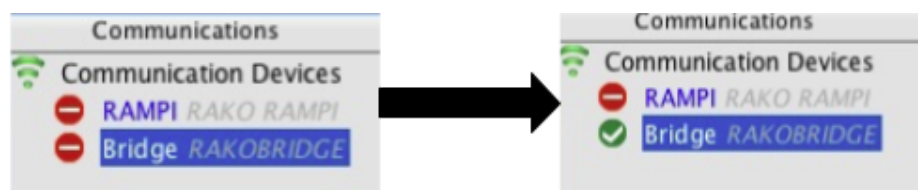
NB

Some firewall programs will prevent access to the Bridge. Temporarily turning off the firewall will allow Bridge configuration. Remember to re-enable the firewall afterwards.

If it is not possible to make connection to the Bridge from the laptop, it could be due to IP addressing in the router. Try connecting the Bridge directly to the laptop using an RJ45 cable. This will allow the Bridge to be configured. Connect the Bridge back onto the router afterwards in order to enable the App to work.

Adding the Bridge as a Device in Rasoft Pro:

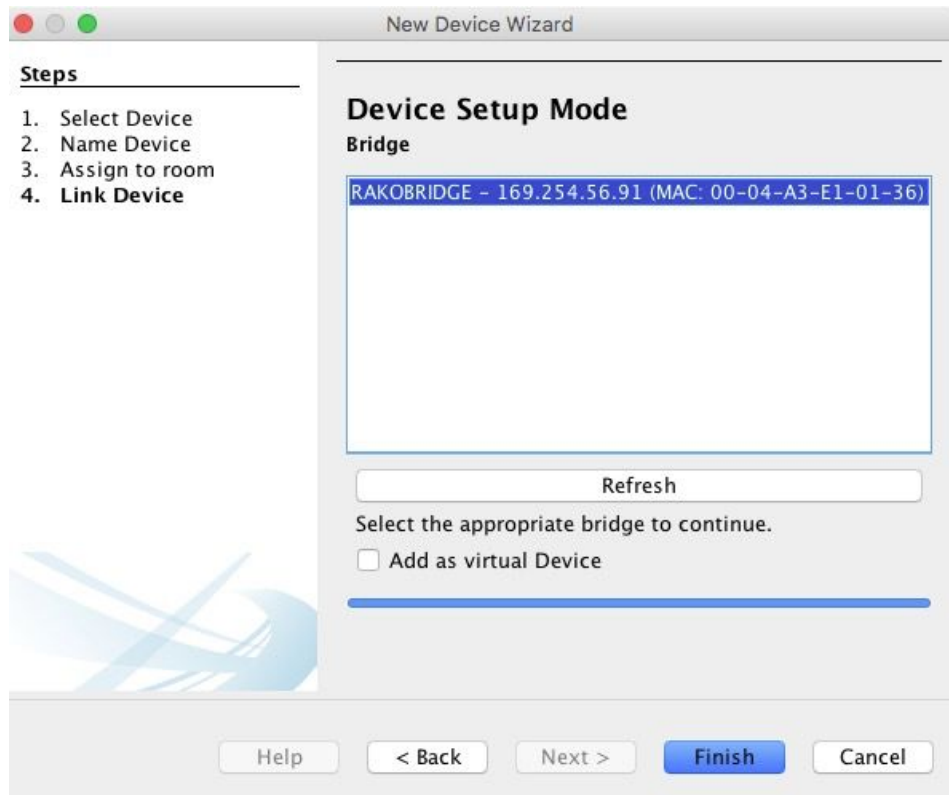
Once the Bridge is successfully connected and the House number has been set the Bridge is ready to talk to the system. The communications window in the bottom right of the screen will say if the Bridge is connected or not. When Rasoft can see the Bridge a green tick will appear next to it.



To add the Bridge as a device select “File” - “New Device” to bring up the “New Device Wizard”. Choose “Bridge” from the device list (it will always be at the top of the list).

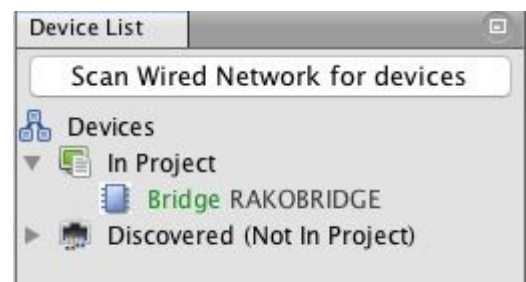
Skip through the “Assign to room” page by clicking next.

This will bring up the screen as below. The Bridge you are connected to will appear followed by its IP and MAC address. Select it and click “finish”.



Once the device has been successfully set up then it will appear in the device list with green text and a blue icon.

Now this device is assigned on the software all Bridge functions will be accessible via tabs in the device editor. For more information on the Bridge functions please see the Bridge instructions contained within the Bridge box.

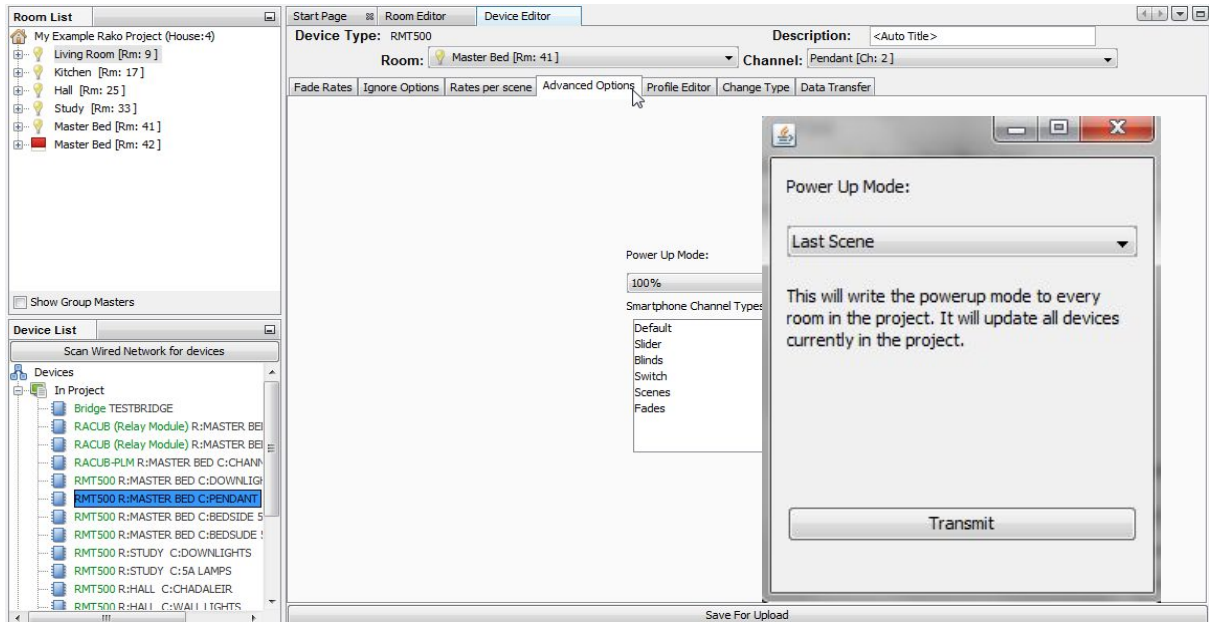


A2 Power up modes

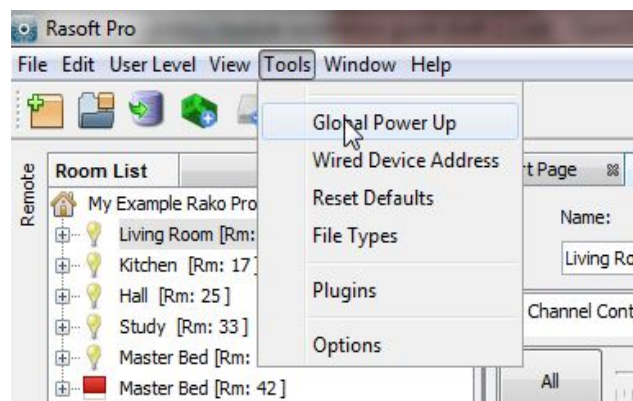
The power up mode dictates the output of a circuit on power restoration. While still on factory default settings all Rako products will have a power up mode setting of 100%.

When new Rako modules are addressed from default then the power up mode will automatically change from 100% to Off. For all other Rako products the power up mode must be changed using the software.

To manually change the power up mode of a specific channel select it in the device list and then go to the “advanced options” tab to show the power up mode options.



It is possible to set the power up modes “globally” for the entire system. To access this menu select “tools” - “global power up”. This will send a House master power up mode to all modules.

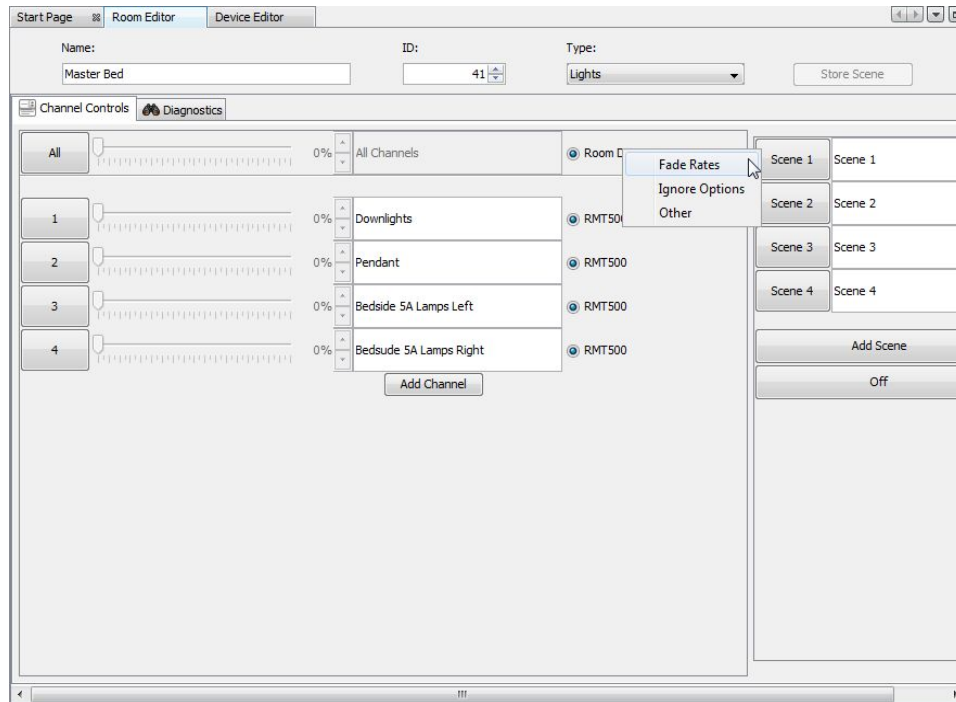


It is advised that the power up mode is either left on “off” or set to “last scene.” In general it is not a good idea to have the lights come on after a power cut so a scene or percentage power up mode is best avoided unless specifically requested.

To test the power-up modes it is a good idea to turn off Rako circuits from the MCB to make sure that the desired power-up modes have been uploaded successfully.

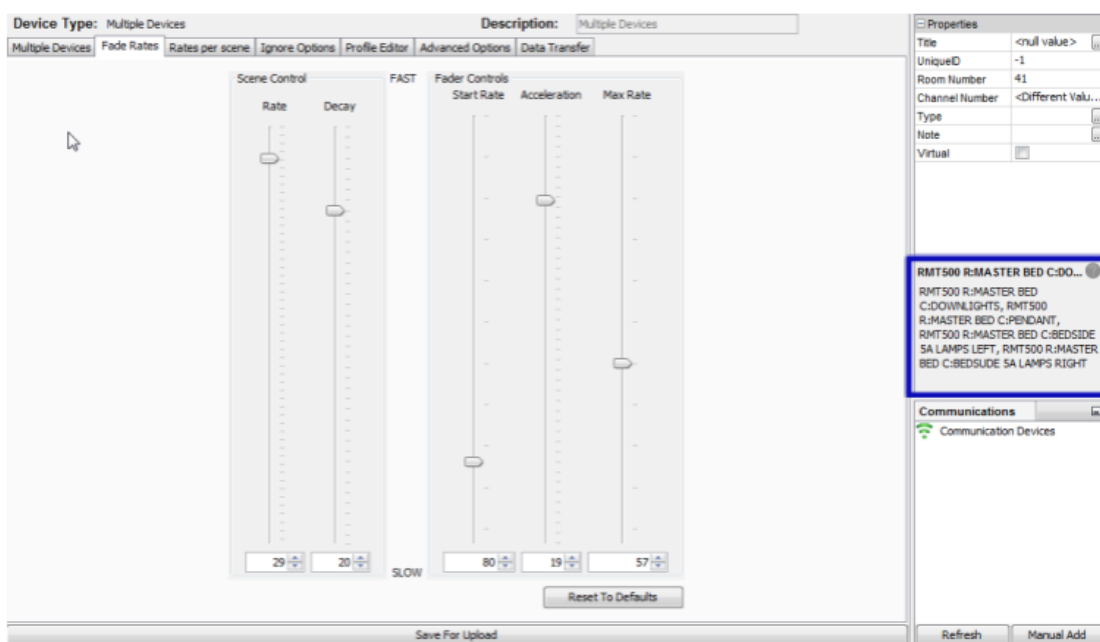
A3 Fade rates

Using Rasoft pro it is possible to edit the rate at which Rako modules move between different lighting levels. To change the fade rates for the entire room right click on “room devices” in the top right of the room editor.



NB

This will set fade rates for every device in the master bedroom. To set fade rates for a specific device select it in the device list and click on the fade rates tab in the device editor.



The fade rates menu will be displayed as above. Notice the window on the right hand side (highlighted above) lists the circuits that will be affected by these changes are listed.

There are two types of fade rates that can be adjusted:

Scene controls will change the rate at which circuits move between scenes (including Off).

Fader controls will change the rate at which circuits dim up or down when the fade buttons (raise/lower) are used.

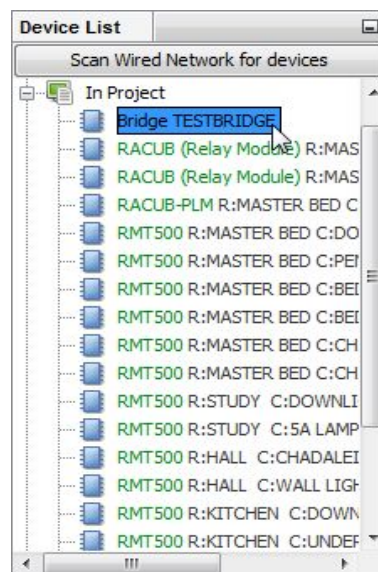
NB

Setting all of the fader controls to max. speed will make it almost impossible to dim the lights from the fade up/down buttons.

A5 Uploading to a Bridge and App setup

When the system is programmed the last thing required is a Bridge upload. This ensures that the programming data on the computer matches that on the Bridge. Even if the Rako App is not being used it is important as it will enable a later download of the project information without the need for the original file.

To upload to the Bridge select the bridge from device list, opening the Bridge options in the device editor tab. Go to the “data transfer” tab and click “upload”.



Note: Sorting the Room columns will affect the smartphone order

Rooms:

ID	Enabled	Title	Type	Mode
9	<input checked="" type="checkbox"/>	Living Room	Lights	4 Scenes + Off
17	<input checked="" type="checkbox"/>	Kitchen	Lights	4 Scenes + Off
25	<input checked="" type="checkbox"/>	Hall	Lights	4 Scenes + Off
33	<input checked="" type="checkbox"/>	Study	Lights	4 Scenes + Off
41	<input checked="" type="checkbox"/>	Master Bed	Lights	4 Scenes + Off
42	<input checked="" type="checkbox"/>	Master Bed	Blinds	4 Scenes + Off
40	<input checked="" type="checkbox"/>	Master Bed Group master	Lights	4 Scenes + Off

Channels:

ID	Enabled	Title	Type

Scenes:

ID	Enabled	Title

Save & Upload To Bridge

Save For Upload

There are several settings that can be altered to change the appearance and functionality of the Rako App. Select the “Smartphone/Wed Data” tab. This should display all the rooms that have been added to the project:

From this page the various setting to define how the App will appear are set. To bring up the channels and scene settings to be uploaded highlight the desired room:

Note: Sorting the Room columns will affect the smartphone order

Rooms:

ID	Enabled	Title	Type	Mode
9	<input checked="" type="checkbox"/>	Living Room	Lights	4 Scenes + Off
17	<input checked="" type="checkbox"/>	Kitchen	Lights	4 Scenes + Off
25	<input checked="" type="checkbox"/>	Hall	Lights	4 Scenes + Off
33	<input checked="" type="checkbox"/>	Study	Lights	4 Scenes + Off
41	<input checked="" type="checkbox"/>	Master Bed	Lights	4 Scenes + Off
42	<input checked="" type="checkbox"/>	Master Bed	Blinds	4 Scenes + Off
40	<input checked="" type="checkbox"/>	Master Bed Group master	Lights	4 Scenes + Off

Channels:

ID	Enabled	Title	Type

Scenes:

ID	Enabled	Title
1	<input checked="" type="checkbox"/>	Scene 1
2	<input checked="" type="checkbox"/>	Scene 2
3	<input checked="" type="checkbox"/>	Scene 3
4	<input checked="" type="checkbox"/>	Scene 4

Save & Upload To Bridge

Save For Upload

Enable – When this box is checked this room/channel/scene will appear on the app.

Title – This will be the label given to this room/channel/scene on the app. Changing this will also change the room name in the room list of the project file.

Type – This will change the screen layout of the channels section in the app.

Mode - This will change how the on screen keypad in the App is displayed. It can represent either a 7 or 10 button keypad. It can also be displayed as a scrolling menu showing all 16 scenes.

It is also possible to change the order in which the rooms will appear in the App. To do this just click and drag the rooms to the desired position.

NB

The Master Bed group master is unchecked, typically group masters or “dummy rooms” will be excluded as they do not have channels associated with them directly.